Preface

Methods Memo No. 124: Design Manual Updates
29 June 2005

With updates in design policy and confusion of what the most up-to-date policies in the office are, the following procedure has been adopted for changing office policies and documenting the changes. If you have any questions please check with Dean Bierwagen or Ken Dunker.

1. As changes in policy are brought up, a draft methods memo is developed. The draft may be written by anyone in the office, but is usually drafted by the methods section.
2. The draft is presented to the policy group (Norm McDonald, Gary Novey, Ahmad Abu-Hawash, Gordy Port, Bill Tucker, John Neiderhiser, Ron Meyer, Ken Dunker, Mike Nop, and Dean Bierwagen).
3. Once the memo is agreed on by the Policy Group and all revisions have been made, the draft is turned in to Gary Novey.
4. Gary signs the memo and it is sent electronically to the Office of Bridges and Structures by Barb Johnsen and to the consultants by Jim Nelson.
5. The memo is also placed in the Design Manual (W:\Highway\Bridge\BridgeDesignManual) in the "Update Memo" file at the end of the most pertinent design section. For example, Methods Memo 105 (Use of Epoxy-Coated Reinforcing Steel) dated 3-28-05 was placed in section "6.8 Update Memos". All memos inside the file are listed in the "Table of Contents" at the beginning of the file.

Table of Contents

Methods Memos No.	Date Issued	Subject
91	3-24-05	Temporary Shoring Adjacent to Roadway
116	3-24-05	Correction to Figure 6.5.2.5 in 6.5 Abutments of the Bridge Design Manual
105	3-28-05	Use of Epoxy-Coated Reinforcing Steel

6. For the consultants, Annette places a copy in the "Policy and Procedures Section" of the Bridges and Structures web site.

   http://www.dot.state.ia.us/bridge/polframe.html

7. When the Design Manual sections are updated, new memos are written into the pertinent sections of the manual and a copy is placed in the commentary. When the updated sections are released, the changes for that release are shown and noted with a line in the margin. For example, the following update was made to steel section in its most recent release:

Flanges [AASHTO-I 10.48, 10.61]

The designer should attempt to use flange plates not exceeding a thickness of 2 inches (50 mm) because fabricators may have difficulty obtaining thicker plates [OBS MM No. 103]. If thicker plates are required due to excessive flange width, the office prefers plates not exceeding a thickness of 2.5 inches (63 mm), in order to avoid potential cracking and lamellar tearing. Flange width should be selected to the nearest whole inch (25 mm). Minimum top flange size is 12 inches by ¾ inch (300 mm by 19 mm), and the flange size shall meet all of the size and proportion rules for flexural members [AASHTO-I 10.48] and for constructibility [AASHTO-I 10.61].

8. The memos are then deleted from the "Update Memos" file.

9. If a new memo changes the policy of a previously released memo, the previously released memo will be updated in the commentary. For example, when the policy on camber calculations was updated because of changes to the Leap program, the following the design manual commentary C5.4.1.4.1.4 was updated to show both memos and the comment **(Superseded by Methods Memo No. 97 on 21 May 2004)** was added to MM No. 83:

C5.4.1.4.1.4 Section properties

Methods Memo No. 97: Revision of MM No. 83 Camber Calculations Using Transformed Sections for Prestressed Beam Design
21 May 2004

The office has recently reviewed the camber values using the transformed section option on the updated ConSpan program, version 2.1.0 by Leap. Based on this review, the Office of Bridges and Structures feels that Leap has addressed the problem with the camber calculations. When using Conspan version 2.1.0 or later versions by Leap, the transformed section camber output shall be used. If you have any questions, please contact the Office of Bridges and Structures, Software Engineer.

Methods Memo No. 83: Camber Calculations Using Transformed Sections
11 April 2003 (Superseded by Methods Memo No. 97 on 21 May 2004)

It has been recently brought to my attention that the ConSpan program may not be calculating camber correctly for Prestressed Concrete beam designs that use the transformed section. In comparison runs that were made, there were large differences in release camber and erection camber using transformed section compared to runs using gross section. For example……

In summary, the most current information can be obtained by reviewing the pertinent section of the Design Manual, and then reviewing the corresponding "Update Memos" section for policy changes made after the most recent manual update. This procedure was adopted to make it easier for personnel to keep track of updates to office policy; however, personnel should make an effort to review memos and the updated sections of the manual as they are released to remain up-to-date on the changes in office policy.